

Serial No.: 09/945,482
Group Art Unit: 2635

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A radio frequency identification (RFID) reader for preventing data collision in an RFID tag system, the RFID reader comprising:

a transferring unit, wherein the transferring unit includes: comprising:

a carrier signal generator for generating a carrier signal determined by that establishes an electromagnetic field strength, wherein the strength of the electromagnetic field defines defining a tag read range;

a carrier signal amplifier for amplifying the carrier signal from the carrier signal generator; and

a gap signal generator for generating establishing a non-transfer period of the RFID reader, wherein the non-transfer period of the RFID reader is dependent on an RFID tag and a tolerance level of an electric device associated with the RFID tag; a receiving unit, wherein the receiving unit includes: comprising:

an amplitude detector for detecting an amplitude of a read tag data stream;

a filtering and amplifying unit for filtering and amplifying the detected amplitude from the amplitude detector; and

a signal collision detector for receiving an output of the filtering and amplifying unit for detecting to detect data collision;

a data decoder; and

an antenna coil.

Claims 2-3 (canceled).

Claim 4 (currently amended): A method for preventing data collision in a radio frequency identification (RFID) system, the method comprising: the steps of:

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- a) transmitting a carrier signal of a predetermined frequency from an RFID reader[[;]], wherein the transmitted carrier signal establishes an electromagnetic field, and wherein the strength of the electromagnetic field defines a tag read range;
- b) amplifying the transmitted carrier signal from the RFID reader;
- [[b]] c) determining whether an amplitude of the transmitted carrier signal is has been modulated;
- [[c]] d) transmitting generating a first gap signal[[;]] dependent on an RFID tag and a tolerance level of an electric device associated with the RFID tag to provide a time gap in the transmitted carrier signal;
- [[d]] e) determining whether [[a]] an RFID tag responsive to a reader signal is within a tag read range;
- [[e]] f) reading an initial response of a card; the RFID tag;
- [[f]] g) if the RFID tag is not within the tag read range, repeating steps e d) and [[d]] e);
- [[g]] h) if the RFID tag exist exists within the tag read range, determining whether the initial response of the card tag read leads to results in data collision;
- [[h]] i) if the initial response leads to results in data collision, repeating steps e d) through [f,] g);
- [[i]] j) if the initial response does not lead to result in data collision, reading the data stored at a memory of the RFID tag with using a predetermined protocol;
- [[j]] k) verifying whether a format of the read data is valid;
- [[k]] l) if the verified format is not valid, repeating steps i j) and [j,] k); and
- [[l]] m) if the verified format is valid, generating a second gap signal to notify indicate that the data transfer is complete and then repeating steps e through [[j,] k).

Claim 5 (canceled).

Claim 6 (currently amended): The method as recited in of claim 4, wherein a period of the second gap signal is shorter than that a period of the first gap signal.

Claim 7 (new): The RFID reader of claim 1, wherein the read tag data stream is outputted from an RFID tag.

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Claim 8 (new): The RFID reader of claim 7, wherein the RFID tag comprises:
an antenna matched to a resonance frequency of the RFID reader; and
an integrated circuit electrically coupled to the antenna.

Claim 9 (new): The RFID reader of claim 8, wherein the integrated circuit comprises:
a memory for storing data; and
a timer for establishing the non-transfer period of the RFID reader.

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Claim 10 (new): The method of claim 4, wherein the tag comprises:
an antenna matched to a resonance frequency of the RFID reader; and
an integrated circuit electrically coupled to the antenna.

Claim 11 (new): The method of claim 10, wherein the integrated circuit comprises:
a memory for storing data; and
a timer for establishing a non-transfer period of the RFID tag.
